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RAW SEQUENCE LISTING            DATE: 09/18/2001
PATENT APPLICATION:  US/09/940,101    TIME: 10:06:56

    Input Set : A:\GENENT.072A2.txt
    Output Set: N:\CRF3\09182001\I940101.raw
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      4  <110>  APPLICANT: Gerritsen, Mary
      5          Sliwkowski, Mark X.
      7  <120>  TITLE OF INVENTION: ErbB4 ANTAGONISTS
     10  <130>  FILE REFERENCE: GENENT.072A2
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C-->  12  <141>  CURRENT FILING DATE: 2001-08-27
     12  <150>  PRIOR APPLICATION NUMBER: 60/229,679
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     15  <150>  PRIOR APPLICATION NUMBER: 60/265,516
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     18  <160>  NUMBER OF SEQ ID NOS: 4
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     23  <211>  LENGTH: 5484
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     29  tgggtgagcc ttctcgtggc ggcggggacc gtccagccca gcgattctca gtcagtgtgt 120
     30  gcaggaacgg agaataaact gagctctctc tctgacctgg aacagcagta ccgagccttg 180
     31  cgcaagtact atgaaaactg tgaggttgtc atgggcaacc tggagataac cagcattgag 240
     32  cacaaccggg acctctcctt cctgcggtct gttcgagaag tcacaggcta cgtgttagtg 300
     33  gctcttaatc agtttcgtta cctgcctctg gagaatttac gcattattcg tgggacaaaa 360
     34  ctttatgagg atcgatatgc cttggcaata tttttaaact acagaaaaga tggaaacttt 420
     35  ggacttcaag aacttggatt aaagaacttg acagaaatcc taaatggtgg agtctatgta 480
     36  gaccagaaca aattcctttg ttatgcagac accattcatt ggcaagatat tgttcggaac 540
     37  ccatggcctt ccaacttgac tcttgtgtca acaaatggta gttcaggatg tggacgttgc 600
     38  cataagtcct gtactggccg ttgctgggga cccacagaaa atcattgcca gactttgaca 660
     39  aggacggtgt gtgcagaaca atgtgacggc agatgctacg gaccttacgt cagtgactgc 720
     40  tgccatcgag aatgtgctgg aggctgctca ggacctaagg acacagactg ctttgcctgc 780
     41  atgaatttca atgacagtgg agcatgtgtt actcagtgtc cccaaacctt tgtctacaat 840
     42  ccaaccacct ttcaactgga gcacaatttc aatgcaaagt acacatatgg agcattctgt 900
     43  gtcaagaaat gtccacataa ctttgtggta gattccagtt cttgtgtgcg tgcctgccct 960
     44  agttccaaga tggaagtaga agaaatgggg attaaaatgt gtaaaccttg cactgacatt 1020
     45  tgcccaaaag cttgtgatgg cattggcaca ggatcattga tgtcagctca gactgtggat 1080
     46  tccagtaaca ttgacaaatt cataaactgt accaagatca atgggaattt gatctttcta 1140
     47  gtcactggta ttcatgggga cccttacaat gcaattgaag ccatagaccc agagaaactg 1200
     48  aacgtctttc ggacagtcag agagataaca ggtttcctga acatacagtc atggccacca 1260
     49  aacatgactg acttcagtgt tttttctaac ctggtgacca ttggtggaag agtactctat 1320
     50  agtggcctgt ccttgcttat cctcaagcaa cagggcatca cctctctaca gttccagtcc 1380
     51  ctgaaggaaa tcagcgcagg aaacatctat attactgaca cagcaacct gtgttattat 1440
     52  cataccatta ctggacaac actcttcagc acaatcaacc agagaatagt aatccgggac 1500
     53  aacagaaaag ctgaaaattg tactgctgaa ggaatggtgt gcaaccatct gtgttccagt 1560
     54  gatggctgtt ggggacctgg gccagaccaa tgtctgtcgt gtcgccgctt cagtagagga 1620
     55  aggatctgca tagagtcttg taacctctat gatggtgaat tcgggagtt tgagaatggc 1680
     56  tccatctgtg tggagtgtga cccccagtgt gagaagatgg aagatggcct cctcacatgc 1740
     57  catggaccgg gtcctgacaa ctgtacaaag tgctctcatt ttaaagatgg cccaaactgt 1800
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 58 gtggaaaaat gtccagatgg cttacagggg gcaaacagtt tcattttcaa gtatgctgat 1860
 59 ccagatcggg agtgccaccc atgccatcca aactgcaccc aagggtgtaa cggtcccact 1920
 60 agtcatgact gcatttacta cccatggacg ggccattcca ctttaccaca acatgctaga 1980
 61 actcccctga ttgcagctgg agtaattggt gggctcttca ttctggtcat tgtgggtctg 2040
 62 acatttgctg tttatgttag aaggaagagc atcaaaaaga aaagagcctt gagaagattc 2100
 63 ttggaaacag agttggtgga accattaact cccagtggca cagcacccaa tcaagctcaa 2160
 64 cttcgtattt tgaaagaaac tgagctgaag agggtaaaag tccttggctc aggtgctttt 2220
 65 ggaacggttt ataaaggtat ttgggtacct gaaggagaaa ctgtgaagat tcctgtggct 2280
 66 attaagattc ttaatgagac aactggtccc aaggcaaatg tggagttcat ggatgaagct 2340
 67 ctgatcatgg caagtatgga tcatccacac ctagtccggt tgctgggtgt gtgtctgagc 2400
 68 ccaaccatcc agctggttac tcaacttatg ccccatggct gcctgttgga gtatgtccac 2460
 69 gagcacaagg ataacattgg atcacaactg ctgcttaact ggtgtgtcca gatagctaag 2520
 70 ggaatgatgt acctggaaga aagacgactc gttcatcggg atttggcagc ccgtaatgtc 2580
 71 ttagtgaaat ctccaaacca tgtgaaaatc acagattttg ggctagccag actcttggaa 2640
 72 ggagatgaaa aagagtacaa tgctgatgga ggaaagatgc caattaaatg gatggctctg 2700
 73 gagtgtatac attacaggaa attcacccat cagagtgacg tttggagcta tggagttact 2760
 74 atatgggaac tgatgacctt tggaggaaaa ccctatgatg gaattccaac gcgagaaatc 2820
 75 cctgatttat tagagaaagg agaacgtttg cctcagcctc ccatctgcac tattgacgtt 2880
 76 tacatggtca tggtcaaatg ttggatgatt gatgctgaca gtagacctaa atttaaggaa 2940
 77 ctggctgctg agttttcaag gatggctcga gaccctcaaa gatacctagt tattcagggt 3000
 78 gatgatcgta tgaagcttcc cagtccaaat gacagcaagt tctttcagaa tctcttggat 3060
 79 gaagaggatt tggaagatat gatggatgct gaggagtact tggtccctca ggctttcaac 3120
 80 atcccacctc ccatctatac ttccagagca agaattgact cgaataggag tgaaattgga 3180
 81 cacagccctc ctcctgccta caccccatg tcaggaaacc agtttgtata ccgagatgga 3240
 82 ggttttgctg ctgaacaagg agtgtctgtg ccctacagag ccccaactag cacaattcca 3300
 83 gaagctcctg tggcacaggg tgctactgct gagattttg atgactcctg ctgtaatggc 3360
 84 accctacgca agccagtggc accccatgtc caagaggaca gtagcaccca gaggtacagt 3420
 85 gctgacccca ccgtgtttgc cccagaacgg agcccacgag gagagctgga tgaggaaggt 3480
 86 tacatgactc ctatgcgaga caaacccaaa caagaatacc tgaatccagt ggaggagaac 3540
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 89 aacacctttg ccaacacctt gggaaaagct gagtacctga agaacaacat actgtcaatg 3720
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101 tgatgtgtgc atatttagca tccctggaaa tcataataaa gtttccatta gaacaaaaga 4440
102 ataacatttt ctataacata tgatagtgtc tgaaattgag aatccagttt ctttccccag 4500
103 cagtttctgt cctagcaagt aagaatggcc aactcaactt tcataattta aaaatctcca 4560
104 ttaaagttat aactagtaat tatgttttca acactttttg gtttttttca ttttgttttg 4620
105 ctctgaccga ttcctttata tttgctcccc tattttttggc tttaatttct aattgcaaag 4680
106 atgtttacat caaagcttct tcacagaatt taagcaagaa atattttaat atagtgaaat 4740
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108 tatcaaatta tcttcaccct catcctttac attttttcaac atttttttttt ctccataaat 4860
109 gacactactt gataggccgt tggttgtctg aagagtagaa gggaaactaa gagacagttc 4920
110 tctgtggttc aggaaaacta ctgatacttt caggggtggc ccaatgaggg aatccattga 4980
111 actggaagaa acacactgga ttgggtatgt ctacctggca gatactcaga aatgtagttt 5040
112 gcacttaagc tgtaatttta tttgttcttt ttctgaactc cattttggat tttgaatcaa 5100
113 gcaatatgga agcaaccagc aaattaacta atttaagtac atttttaaaa aaagagctaa 5160
114 gataaagact gtggaaatgc caaaccaagc aaattaggaa ccttgcaacg gtatccaggg 5220
115 actatgatga gaggccagca cattatcttc atatgtcacc tttgctacgc aaggaaattt 5280
116 gttcagttcg tatacttcgt aagaaggaat gcgagtaagg attggcttga attccatgga 5340
117 atttctagta tgagactatt tatatgaagt agaaggtaac tctttgcaca taaattggta 5400
118 taataaaaag aaaaacacaa acattcaaag cttagggata ggtccttggg tcaaaagttg 5460
119 taaataaatg tgaaacatct tctc                                        5484
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121 <210> SEQ ID NO: 2
122 <211> LENGTH: 1308
123 <212> TYPE: PRT
124 <213> ORGANISM: Homo sapiens

126 <400> SEQUENCE: 2
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129 Ala Gly Thr Val Gln Pro Ser Asp Ser Gln Ser Val Cys Ala Gly Thr
130             20                  25                  30
131 Glu Asn Lys Leu Ser Ser Leu Ser Asp Leu Glu Gln Gln Tyr Arg Ala
132         35                  40                  45
133 Leu Arg Lys Tyr Tyr Glu Asn Cys Glu Val Val Met Gly Asn Leu Glu
134     50                  55                  60
135 Ile Thr Ser Ile Glu His Asn Arg Asp Leu Ser Phe Leu Arg Ser Val
136 65              70                  75                  80
137 Arg Glu Val Thr Gly Tyr Val Leu Val Ala Leu Asn Gln Phe Arg Tyr
138             85                  90                  95
139 Leu Pro Leu Glu Asn Leu Arg Ile Ile Arg Gly Thr Lys Leu Tyr Glu
140             100                 105                 110
141 Asp Arg Tyr Ala Leu Ala Ile Phe Leu Asn Tyr Arg Lys Asp Gly Asn
142         115                 120                 125
143 Phe Gly Leu Gln Glu Leu Gly Leu Lys Asn Leu Thr Glu Ile Leu Asn
144     130                 135                 140
145 Gly Gly Val Tyr Val Asp Gln Asn Lys Phe Leu Cys Tyr Ala Asp Thr
146 145                 150                 155                 160
147 Ile His Trp Gln Asp Ile Val Arg Asn Pro Trp Pro Ser Asn Leu Thr
148             165                 170                 175
149 Leu Val Ser Thr Asn Gly Ser Ser Gly Cys Gly Arg Cys His Lys Ser
150             180                 185                 190
151 Cys Thr Gly Arg Cys Trp Gly Pro Thr Glu Asn His Cys Gln Thr Leu
152         195                 200                 205
153 Thr Arg Thr Val Cys Ala Glu Gln Cys Asp Gly Arg Cys Tyr Gly Pro
154     210                 215                 220
155 Tyr Val Ser Asp Cys Cys His Arg Glu Cys Ala Gly Gly Cys Ser Gly
156 225                 230                 235                 240
157 Pro Lys Asp Thr Asp Cys Phe Ala Cys Met Asn Phe Asn Asp Ser Gly
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158              245              250              255
159 Ala Cys Val Thr Gln Cys Pro Gln Thr Phe Val Tyr Asn Pro Thr Thr
160          260              265              270
161 Phe Gln Leu Glu His Asn Phe Asn Ala Lys Tyr Thr Tyr Gly Ala Phe
162          275              280              285
163 Cys Val Lys Lys Cys Pro His Asn Phe Val Val Asp Ser Ser Ser Cys
164          290              295              300
165 Val Arg Ala Cys Pro Ser Ser Lys Met Glu Val Glu Glu Asn Gly Ile
166 305              310              315              320
167 Lys Met Cys Lys Pro Cys Thr Asp Ile Cys Pro Lys Ala Cys Asp Gly
168              325              330              335
169 Ile Gly Thr Gly Ser Leu Met Ser Ala Gln Thr Val Asp Ser Ser Asn
170          340              345              350
171 Ile Asp Lys Phe Ile Asn Cys Thr Lys Ile Asn Gly Asn Leu Ile Phe
172          355              360              365
173 Leu Val Thr Gly Ile His Gly Asp Pro Tyr Asn Ala Ile Glu Ala Ile
174          370              375              380
175 Asp Pro Glu Lys Leu Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly
176 385              390              395              400
177 Phe Leu Asn Ile Gln Ser Trp Pro Pro Asn Met Thr Asp Phe Ser Val
178              405              410              415
179 Phe Ser Asn Leu Val Thr Ile Gly Gly Arg Val Leu Tyr Ser Gly Leu
180          420              425              430
181 Ser Leu Leu Ile Leu Lys Gln Gln Gly Ile Thr Ser Leu Gln Phe Gln
182          435              440              445
183 Ser Leu Lys Glu Ile Ser Ala Gly Asn Ile Tyr Ile Thr Asp Asn Ser
184          450              455              460
185 Asn Leu Cys Tyr Tyr His Thr Ile Asn Trp Thr Thr Leu Phe Ser Thr
186 465              470              475              480
187 Ile Asn Gln Arg Ile Val Ile Arg Asp Asn Arg Lys Ala Glu Asn Cys
188              485              490              495
189 Thr Ala Glu Gly Met Val Cys Asn His Leu Cys Ser Ser Asp Gly Cys
190          500              505              510
191 Trp Gly Pro Gly Pro Asp Gln Cys Leu Ser Cys Arg Arg Phe Ser Arg
192          515              520              525
193 Gly Arg Ile Cys Ile Glu Ser Cys Asn Leu Tyr Asp Gly Glu Phe Arg
194          530              535              540
195 Glu Phe Glu Asn Gly Ser Ile Cys Val Glu Cys Asp Pro Gln Cys Glu
196 545              550              555              560
197 Lys Met Glu Asp Gly Leu Leu Thr Cys His Gly Pro Gly Pro Asp Asn
198          565              570              575
199 Cys Thr Lys Cys Ser His Phe Lys Asp Gly Pro Asn Cys Val Glu Lys
200          580              585              590
201 Cys Pro Asp Gly Leu Gln Gly Ala Asn Ser Phe Ile Phe Lys Tyr Ala
202          595              600              605
203 Asp Pro Asp Arg Glu Cys His Pro Cys His Pro Asn Cys Thr Gln Gly
204          610              615              620
205 Cys Asn Gly Pro Thr Ser His Asp Cys Ile Tyr Tyr Pro Trp Thr Gly
206 625              630              635              640
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207 His Ser Thr Leu Pro Gln His Ala Arg Thr Pro Leu Ile Ala Ala Gly
208             645             650             655
209 Val Ile Gly Gly Leu Phe Ile Leu Val Ile Val Gly Leu Thr Phe Ala
210             660             665             670
211 Val Tyr Val Arg Arg Lys Ser Ile Lys Lys Lys Arg Ala Leu Arg Arg
212         675             680             685
213 Phe Leu Glu Thr Glu Leu Val Glu Pro Leu Thr Pro Ser Gly Thr Ala
214     690             695             700
215 Pro Asn Gln Ala Gln Leu Arg Ile Leu Lys Glu Thr Glu Leu Lys Arg
216 705             710             715             720
217 Val Lys Val Leu Gly Ser Gly Ala Phe Gly Thr Val Tyr Lys Gly Ile
218             725             730             735
219 Trp Val Pro Glu Gly Glu Thr Val Lys Ile Pro Val Ala Ile Lys Ile
220             740             745             750
221 Leu Asn Glu Thr Thr Gly Pro Lys Ala Asn Val Glu Phe Met Asp Glu
222             755             760             765
223 Ala Leu Ile Met Ala Ser Met Asp His Pro His Leu Val Arg Leu Leu
224     770             775             780
225 Gly Val Cys Leu Ser Pro Thr Ile Gln Leu Val Thr Gln Leu Met Pro
226 785             790             795             800
227 His Gly Cys Leu Leu Glu Tyr Val His Glu His Lys Asp Asn Ile Gly
228             805             810             815
229 Ser Gln Leu Leu Leu Asn Trp Cys Val Gln Ile Ala Lys Gly Met Met
230             820             825             830
231 Tyr Leu Glu Glu Arg Arg Leu Val His Arg Asp Leu Ala Ala Arg Asn
232         835             840             845
233 Val Leu Val Lys Ser Pro Asn His Val Lys Ile Thr Asp Phe Gly Leu
234     850             855             860
235 Ala Arg Leu Leu Glu Gly Asp Glu Lys Glu Tyr Asn Ala Asp Gly Gly
236 865             870             875             880
237 Lys Met Pro Ile Lys Trp Met Ala Leu Glu Cys Ile His Tyr Arg Lys
238             885             890             895
239 Phe Thr His Gln Ser Asp Val Trp Ser Tyr Gly Val Thr Ile Trp Glu
240             900             905             910
241 Leu Met Thr Phe Gly Gly Lys Pro Tyr Asp Gly Ile Pro Thr Arg Glu
242         915             920             925
243 Ile Pro Asp Leu Leu Glu Lys Gly Glu Arg Leu Pro Gln Pro Pro Ile
244     930             935             940
245 Cys Thr Ile Asp Val Tyr Met Val Met Val Lys Cys Trp Met Ile Asp
246 945             950             955             960
247 Ala Asp Ser Arg Pro Lys Phe Lys Glu Leu Ala Ala Glu Phe Ser Arg
248             965             970             975
249 Met Ala Arg Asp Pro Gln Arg Tyr Leu Val Ile Gln Gly Asp Asp Arg
250         980             985             990
251 Met Lys Leu Pro Ser Pro Asn Asp Ser Lys Phe Phe Gln Asn Leu Leu
252         995             1000            1005
253 Asp Glu Glu Asp Leu Glu Asp Met Met Asp Ala Glu Glu Tyr Leu Val
254     1010            1015            1020
255 Pro Gln Ala Phe Asn Ile Pro Pro Pro Ile Tyr Thr Ser Arg Ala Arg
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VERIFICATION SUMMARY   DATE: 09/18/2001
PATENT APPLICATION: US/09/940,101   TIME: 10:06:57

Input Set : A:\GENENT.072A2.txt
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L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date